EVALUATION REPORT

Company **Packworks, LLC**
Application # **5132**
Plant # **14308**

1. Background:

Packworks, LLC has applied for an Authority to Construct and/or Permit to Operate two sheetfed printing presses.

2. Emission Calculations:

A spreadsheet is attached to this permit application that shows the emissions based on the applicant using the inks, varnishes, fountain solution ingredients and cleanup solvent listed on the PRINTER MATERIAL USAGE INFORMATION form submitted with the application and subsequently modified with the applicant's letter. The allowable solvent usage has been set as the highest level that does not trigger additional requirements. This is to allow the operator's business to grow without the need to apply for additional permits. Since the applicant listed on Data Form S that it intends to operate 5 days per week and 52 weeks per year (for 260 days per year), each source may emit up to 2,600 pounds per year (1.300 tpy) of a regulated pollutant without triggering BACT.

Based on the proposed new permit conditions for the Presses (S-1 and S-2), the potential-to-emit for POC and NPOC is the following:

POC and NPOC = 2,600 pounds per year * 2 presses/2000 lbs/ton = 2.600 TPY

The bulk of the emissions come from cleanup solvents. The applicant can apply a 95% retention factor to conventional inks and conventional varnishes (not water-based inks and varnishes) and a 50% retention factor to cleanup solvents applied with a wipe/rag that have a solvent vapor pressure less than 10 mmHg @ 20°C in accordance with US EPA guidance. The applicant's two presses each have an automatic blanket washing system. This evaluation, therefore, assumes that 100% of the cleanup solvent evaporates.

The attached spreadsheet does not list emission calculations for NPOCs since no NPOCs were identified. For additional flexibility, I recommend that the NPOC emission limit be equivalent to the POC emission limit. Standard permit conditions will limit the applicant to its requested usage with an option to emit more provided it tracks emissions of POCs, NPOCs and TACs to what is approvable in this application.

TOXICS

Review of the Material Safety Data Sheets indicate the existence of the following toxics:

TAC	CAS No.	TAC Trigger, lb/yr
2-butoxy ethanol	111762	3.9E+03
Glycol ethers including 2-butoxy ethanol	Varies	3.9 +E03 to 3.9 +E04
Isopropyl alcohol	67630	4.4E+05

At the usage level provided in the permit application, the applicant will not exceed any TAC trigger level. However, the applicant will be given flexibility to use other materials provided all TAC emissions are below their respective trigger levels. Because TAC emissions are below their respective trigger levels, an Air Toxics Screening is not required.

3. Statement of Compliance:

The Presses (S-1 and S-2) are subject to and appear to be in compliance with District Regulation 8, Rule 20, Sections 302, 309 and 320. Section 302 identifies the VOC standards for inks, coatings, adhesives and fountain solutions. Section 309 identifies the VOC standards for cleaning products. Section 320 requires good housekeeping. The ink and varnishes proposed for use by Packworks, LLC are complying ($VOC_{inks\ and\ varnishes}$<2.5 lb/gal). The mixed fountain solution uses a fountain solution concentrate without alcohol so is presumed to have a mixed VOC concentration of less than the standard of 8% by volume. In addition, the cleaning products will be complying ($VOC_{lithographic}$≤10 mm Hg and VOC_{other} ≤ 25 mm Hg). Review of the Material Safety Data sheets indicate that only complying low VOC inks and low vapor pressure solvents will be used at S-1 and S-2.

Best Available Control Technology
Because the emissions of each Press (S-1 and S-2) will be conditioned to not exceed 10 pounds per day, a Best Available Control Technology (BACT) review is not required. However, each source complies with BACT2. Recordkeeping to demonstrate that BACT is not triggered will be on a monthly basis when the applicant chooses to comply with the rolling 12-month optional emission limit.

Offsets
Because the total allowed POC emissions for this new facility will be below 15 tpy, offsets do not need to be provided at this time.

Other
Regulation 10 - New Source Performance Standard and Regulation 11 - Hazardous Pollutants requirements are also not triggered. This application is ministerial (Permit Handbook Chapter 5.4); so the requirements of the California Environmental Quality Act (CEQA) are satisfied. The facility **is** located within 1000 feet of a school, so a public notification for schools was triggered. The attached public notice was prepared and ……..

4. Conditions

Conditions for Source S-1 AND S-2, Plant 14308, Application 5132

1. The owner/operator shall not use more than the following amount of inks, varnishes, fountain solution ingredients, and cleanup solvents at S-1 and S-2, in any consecutive 12-month period:
   a. For S-1:

Material	Usage Limit in gallons

1). Toyo Aqualess Super Process Inks with a VOC content not to exceed 1.54 pounds per gallon 44
2). Wikoff Aquakote coating with a VOC content not to exceed 0.43 pounds per gallon 474
3). Anchor Lithkemko ARS-ML Press Wash 68
4). Anchor Lithkemko Fountain Solution Concentrate 26

b. For S-2:

Material	Usage Limit in gallons
1). Toyo Aqualess Super Process Inks with a VOC content not to exceed 1.54 pounds per gallon	44
2). Wikoff Aquakote coating with a VOC content not to exceed 0.43 pounds per gallon	474
3). Anchor Lithkemko ARS-ML Press Wash	68
4). Anchor Lithkemko Fountain Solution Concentrate	26

(basis: Cumulative Increase, Toxic Risk Screen)

2. The owner/operator may use at S-1 AND S-2 inks, varnishes, fountain solution, and cleanup solvents other than the materials specified in Condition #1 and/or in excess of those specified in Condition 1 provided that the owner/operator can demonstrate that all of the following are satisfied:

   a. POC emissions per source do not exceed 1.300 tons in any consecutive 12-month period.
   b. NPOC emissions per source do not exceed 1.300 tons in any consecutive 12-month period.
   c. The use of these materials does not increase toxic emissions above any risk screening trigger level.
   d. Annual POC emissions per source are less than 10 pounds per average operating day.
   e. Annual NPOC emissions per source are less than 10 pounds per average operating day.

   Note that emissions from ink and varnish usage (but excluding water-based inks and varnishes) may be calculated assuming 95% by weight of the volatile organic compounds are not emitted.

   Note that emissions from cleaning solvent usage, excluding automatic blanket and roller wash, that has a vapor pressure less than 10 mmHg at 20 degrees C may be calculated assuming 50% by weight of the volatile organic compounds are retained in rags and wipes and not emitted.

   (basis: Cumulative Increase, Toxic Risk Screen)

3. To determine compliance with the above conditions, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above conditions, including the following information:

   a. Type, POC content, NPOC content, and monthly usage of all POC and NPOC containing materials used at S-1;
   a. Type, POC content, NPOC content, and monthly usage of all POC and NPOC containing materials used at S-2;

b. If a material other than those specified in Condition # 1 is used and/or usage is in excess of those specified in Condition 1, mass emission calculations of POC, NPOC and toxic air contaminants to demonstrate compliance with Condition 2, on a monthly basis. Emissions of POC, NPOC and toxic air contaminants shall be calculated for each source and toxic air contaminants shall be summed for S-1 plus S-2 to demonstrate compliance with Condition 2.
c. Monthly usage and/or emission calculations shall be totaled for each consecutive twelve-month period.

(basis: Cumulative Increase, Toxic Risk Screen)

The owner/operator shall retain all records on-site for two years, from the date of entry, and make the records available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (basis: Best Available Control Technology, Toxic Risk Screen, Cumulative Increase, Regulation 1-441)

5. Permit to Operate:

I recommend that a Permit to Operate be issued to Packworks, LLC for:

S-1 Sheetfed Lithographic Press, Heidelberg Speedmaster CD 74 Six Color plus Coater
S-2 Sheetfed Lithographic Press, Heidelberg Quickmaster DI 46-4

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By Donald Van Buren, PE Date
Air Quality Engineer II